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# **VAMS TIM**

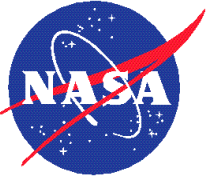
## **Breakout Session #1**

### **Technology Roadmaps**

**Group 1**

**Joseph Del Balzo, Facilitator**

**May 22, 2002**

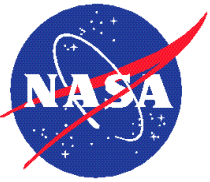


# Purpose of Technology Roadmap

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- ✓ **ID the technologies needed and a way to achieve them to support the development (implementation?) of a specific concept**
  - Tech Roadmap will starts as functional statement and then iterates to specific technology
  - Roadmap goes hand in hand with the Concept Development
- ✓ **ID technologies that support more than one concept**
- ✓ **ID (when needed) key decision milestones for technology choices**

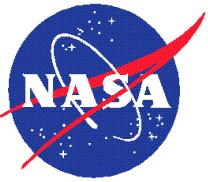


# What should Technology Roadmap contain?

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- ✓ **Timelines and activities needed for technology development**
- ✓ **Performance goals of technology (not of the future ATM system)**
- ✓ **Enabling technologies identified**
- ✓ **Dynamically adapt to changing projections**
- ✓ **(Probable cost for required R & D & Implementation – does not belong here.... in cost section of Concept Doc)**
- ✓ **(not the socio-economic/political assumptions ... is in the Concept Document)**

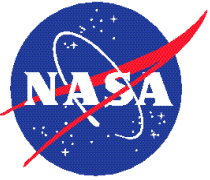


# Tech. Roadmaps changing per phase of the project

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- ✓ Should the format of the Technology Roadmaps change to include include different emphasis for each phase of the project -- No
- ✓ Should the content of the Technology Roadmaps change to include include different emphasis for each phase of the project -- YES

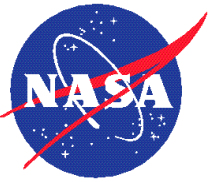


# Where do the Transition Plans fit?

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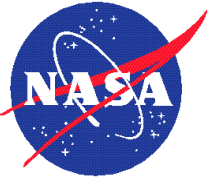
- ✓ Technology Transition Plan is needed
- ✓ Is it part of the Technology Roadmap?...don't know



# Recommendations



- ✓ **Technology Roadmap should be limited to the technology development required for each of the Concepts (and include milestones?)**
- ✓ **Other items in Del's "Tech Roadmap Characteristics" to be put into some supporting document**



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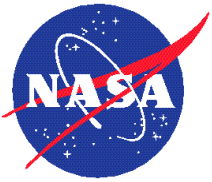
# **VAMS TIM**

## **Breakout Session #1 - Roadmaps**

**Group 2**

**Kevin Corker, Facilitator**

**May 22, 2002**



## **What is purpose of Technology Roadmap Tool for decision-makers? Why do we need it?**

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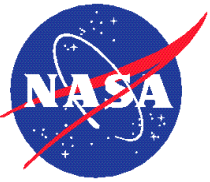


**Technology Roadmap may not be the right term  
Capability & Function Map**

**Roadmap include Political and Policy**

**Roadmap include Roles and Responsibilities  
Roadmap distinguished from Program Plan**

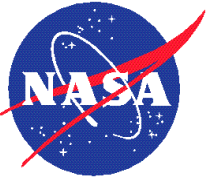




# Road Map Should Contain?



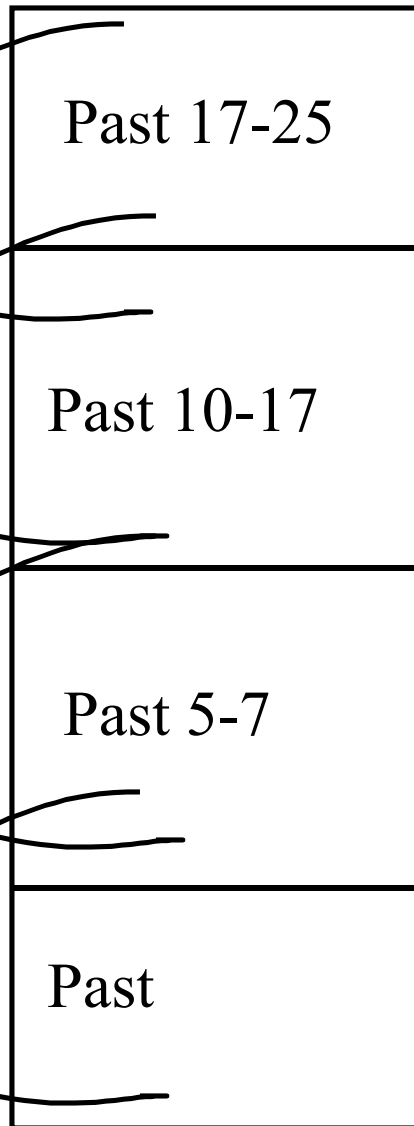
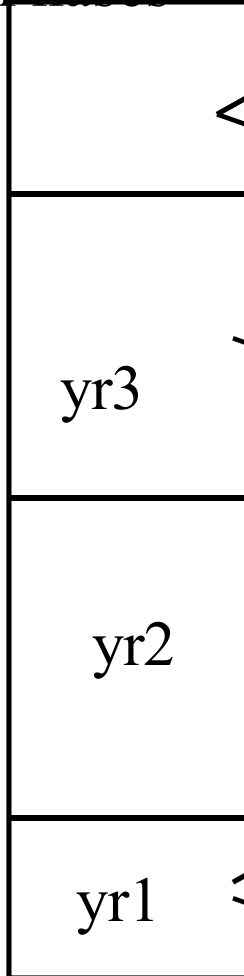
- ✓ **Why should it contain What ? Gets to purpose**
  - **Affect/guide policy**
  - **Iteratively be updated and form changed by Phase**
  - **Contain Critical Decision Points**
    - **NASA and Contractor Teams**
    - **Investment strategy**
  - **Consider Blending Process**
  - **Consider risk/fall back process in complex and non linear systems**
  - **Contain costs (in the aggregate)**
  - **Insertion, Extraction and Transition process**
  - **Technology Level of Capability not new development**
  - **Basic Research issues**
  - **Be different than the program plan**



# RoadMap to Program Map



Program  
Phases

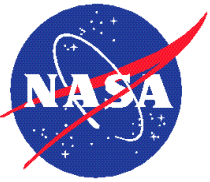


Blending and  
Harmonization

Real time  
Feasibility

Non-Real time  
feasiblity

Demand case

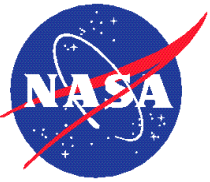


# Basic Research Issues AS critical design points

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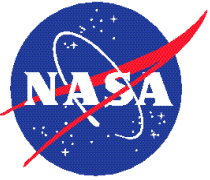
- ✓ **Acoustic**
- ✓ **Socio-political (demand and need drivers)**
- ✓ **Environmental**
- ✓ **Vortex – penetration, avoidance**
- ✓ **Human Factors**
- ✓ **Weather (Hazardous condition identification, prediction)**
- ✓ **Large scale chaotic systems**
- ✓ **Human Factors**



# Issues



- ✓ **Issues with Roadmap**
- ✓ **Timing – now is too early**
- ✓ **RM is different than concept program plan**
- ✓ **What is linkage to SEA to guide roadmaps**
- ✓ **What is proprietary status of RM – share the light.**
- ✓ **Multi-Modal**



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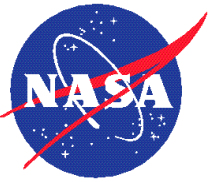
# **VAMS TIM**

## **Breakout Session #1 - Roadmaps**

**Group 3**

**Earl Van Landingham, Facilitator**

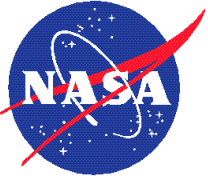
**May 22, 2002**



# Key points



- ✓ 1) Need “concept roadmap” of which one part is technology, but includes socio-economic issues, legal considerations, etc
- ✓ 2) Expect roadmaps to mature (evolve) based on increasing fidelity of costs and benefits and other facets of concept
- ✓ 3) Technology Element of Roadmap
  - Key technology to be organized by common functional architecture and identified by time frame and performance objectives.
- ✓ Summary
  - Need to address subject at next TIM



## Other ideas



- ✓ 1) **Expect to have multiple path roadmap – Need functional architecture of what we are trying to achieve**
- ✓ 2) **Are we talking about new technology or better ways of piecing together technology? Want successful implementation of technology. Roadmap are requirements driven (Functional needs and performance needs)**
- ✓ 3) **Do we need to know how much capacity gained by a particular concept before generating detailed roadmap?**